

AN INTERNAL COAXIAL CABLE ELECTRICAL CONNECTOR FOR USE IN DOWN-HOLE TOOLS

Abstract

A coaxial cable electrical connector more specifically an internal coaxial cable connector placed within a coaxial cable and its constituent components. A coaxial cable connector is in electrical communication with an inductive transformer and a coaxial cable. The connector is in electrical communication with the outer housing of the inductive transformer. A generally coaxial center conductor, a portion of which could be the coil in the inductive transformer, passes through the connector, is electrically insulated from the connector, and is in electrical communication with the conductive core of the coaxial cable. A plurality of bulbous pliant tabs on the coaxial cable connector mechanically engage the inside diameter of the coaxial cable thus grounding the transformer to the coaxial cable. The coaxial cable and inductive transformer are disposed within downhole tools to transmit electrical signals between downhole tools within a drill string. The internal coaxial cable connector can be used in a plurality of downhole tools, such

as sections of pipe in a drill string, drill collars, heavy weight drill pipe, and jars.